Contact with extraterrestrial civilizations

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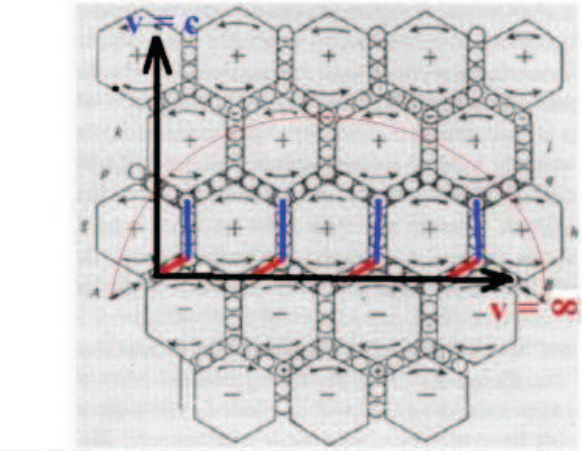
Referat: «And the beauty of it is, down at the quantum level, links to any place we want already exist: all we have to do is find them» [1].

In nova fert animus mutatas
dicere formas corpora.
Metamorphoses. Ovidius

Observations [2] intensity changes CMB did not reveal the existence of meaningful regularities outside the set of random numbers. Thereby, the authors pitilessly have deprived us of the opportunity to connect to the information network of the universe and the rapid establishment of the First Contact of Civilizations by registering law-appearance and disappearance of the lacunae in the CMB [3]. However, they are also gave us the opportunity to not come to the network at the finish as talking monkeys, and to act as the forefathers of the Internet Universe.

"We'll go another way" and consider the possibility of Shayda-Maxwellian Robot (SMR) [4] to increase the capacity of a quantum channel is necessary for us.

SMR only in the particular case operates the collapse of the wave function CMB photons, its main mission is the entanglement the grain of the physical vacuum in the form of zero-point fluctuations of the electromagnetic field oscillations (Fig. 1).



This drawing was found in the 1861 paper of Maxwell [1] explaining the induction of the current by electromagnetic means, within a corpuscular medium

[1] J.C. Maxwell, On physical lines of force, Philosophical Magazine and Journal of Science, Part II, London March 1861, http://upload.wikimedia.org/wikipedia/commons/b/b8/On_Physical_Lines_of_Force.pdf

Рис. ___ Сверхсветовой робот Shayda-Maxwell.

Fig.1. Superluminal Shayda-Maxwellian Robot - Superluminal SMR [4].

In the figure demonstrate a red vector field behavior when the states at the points A and B, and between points A and B are changed simultaneously and synchronically, ie $v \rightarrow \infty$; blue vector illustrate the distribution of the field up to the speed of light v = c.

Time of passage length L is for SMR $T = L / v$, then $T_{blue} = L / c = t$ and $T_{red} \rightarrow L / \infty = 0$

Thus the evolution proceeds fields along two axes (Fig.2.), namely the:

$T = t$, that is, exists time and evolution described by the equation $\hat{H}|\psi\rangle = i\partial t|\psi\rangle$ of the Cats-hater[*1]

and

$T = 0$, when the time does not exist, and the equation of the Cats-hater transformed into the equation $\hat{H}|\psi\rangle = 0$ of Wheeler - De Witt, for whom absence of time equivalent to the presence of gravity.

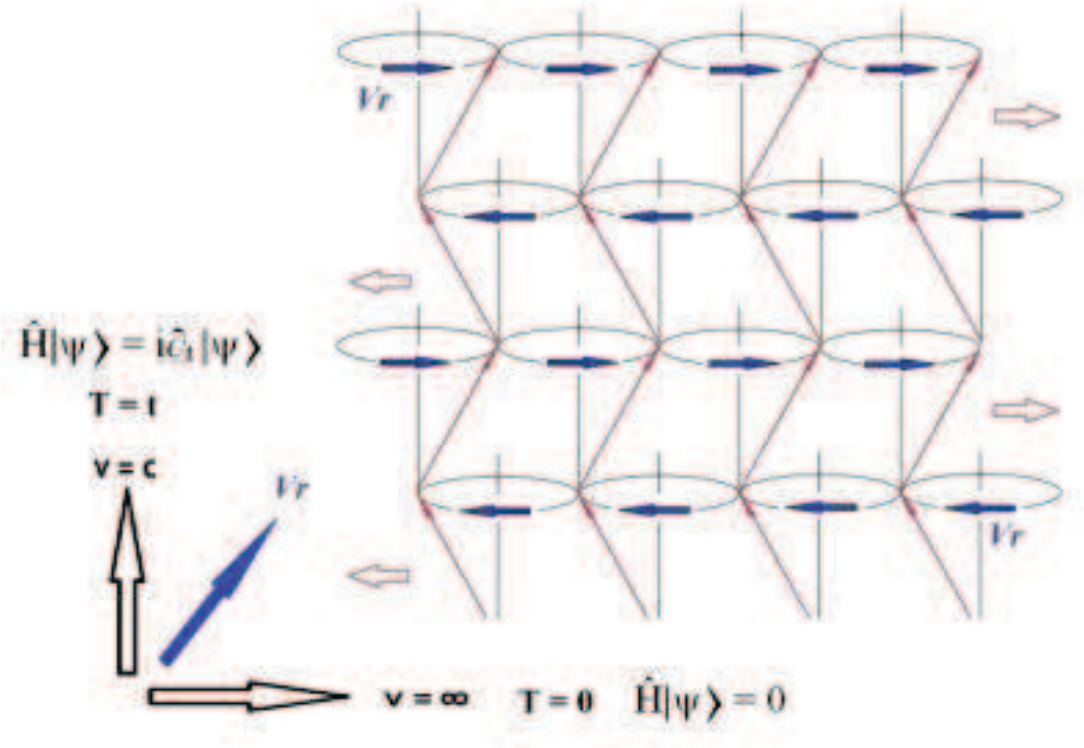


Fig.2. Compliance of velocities and times of the descriptions of the field of motion in the form of a zig-zag and the tick-tock of the oscillations.

Duality equations of Wheeler - De Witt (general theory of relativity, the theory with gravity) and of the Cats-hater (quantum mechanics, the theory without gravity) allows quantize gravity and time to take in a single continuum, which performs entanglement SMR.

The SMR, rephrase the expression [5] of merging of asymptotic solutions, in particular, a single Planck's formula on the basis splice the limit solutions the thesis "Time to stitch" is transformed into the maxim "Stitch to time."

For illustrative purposes the axes $x \rightarrow \infty$ and $v = c$ depict (Fig.3.) only part of the equipotential surface formed by the oscillators of the field.

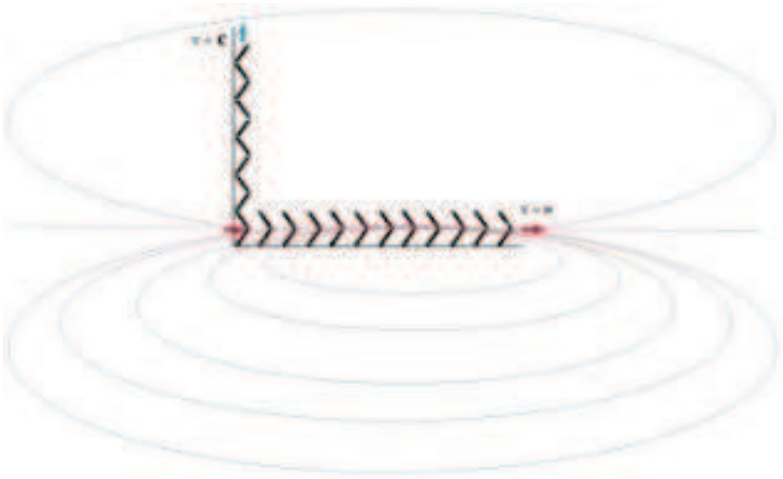


Fig.3. A fragment of the surface of the field.

On the axis v → ∞ there is a set of circles transcendental tachyon filling continuum, which are the graviton (spin 2, two zig-zag one tick-tock of a photon with spin 1) shareable a longitudinal fashion on both sides of vv-branes.

No time - there is gravity. There is a time - there is movement. Program of A. Vlasov "Movement is inseparable from the particle" the SMR newly formulated as "The movement can not be separated from the masses".

For a fastidious mind especially an exquisite is the spread of SMR on AdS / CFT conformity. There an elitist space AdS has the luxury of timelessness to the instantaneous velocity v = ∞ and every moment has the authority of the masses, and in the philistine little world of CFT interaction are carried out at a snail's speed v = c and objects, and the subjects of this space is also, deprived by weightiness of their judgments about the nature of things .

Not difficult to see that the phenomena on the axis v = c are measured by rational numbers of type L / v, and on the axis v → ∞ used a quasi-infinite number of p-adic L / ∞. As a result of the continuum Games [6] described adeles and two-point Pade approximation creates granular ultrametric space.

The well-known poet-Vegetable[*2] axiomatizable Faith as the root cause of the possibility of matching asymptotic solutions [5] for v → 0 and v → ∞ in the v = c = 1:

As a in this two-voice fugue
He himself neither is infinitely small,
He trusts in the knowledge about each other
Two the Origins limitlessly faraway.

The object of poetry, the RSM metamorphose, is easily identified as a liquid [7], [8] tachyon crystal [9], but does not describe the string / brane, and quite trivial electromagnetic field, including in the form of zero-point oscillations of banal physical vacuum.

Alas, we can not avoid the "revelation full of the pathos", but it is our level of reality, our dimension, our world, but only in the form of a multi-layer superconductor, along the axis v → ∞, crystal moving along the axis v = c and penetrates the superfluid fluid.

The two neighboring crystal layer tachyon "rotate" to meet each other at a speed Vr (Fig.2.), moreover amusing that Vr can be any, including Vr → 0, but at the same speed "everything suddenly" along the tachyon will v → ∞.

For three-dimensional space on each space axis, characterized by a vacuum all three velocity Vr → 0, v = c and v → ∞, the complex with respect to each other. In all directions of vacuum every moment and crystal and a fluid, and a state of absolute immobility, his particular

form of presentation depends on what kind of the frame of reference could take a the meditator [10].

The Player [6] with [11] proposes to explore the deep connection between the wave equation and determined the Riemann zeta-function for selecting a particular form of presentation of the quantum designs.

From reformulation [12] Riemann hypothesis on the complex plane were plotted trajectory behavior of certain characteristics of iterations that collectively (after a dissection figures [12]) give a picture of what is happening in the amount of space behind the plane of the evolution of the field in the conjugate axis (Fig. 4 a) and oscillation vector field in a plane (Fig. 4 b).

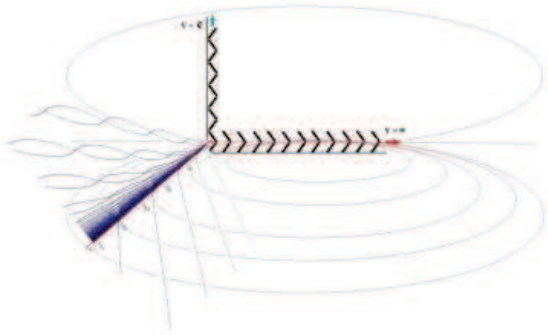


Fig. 4 a. [12]

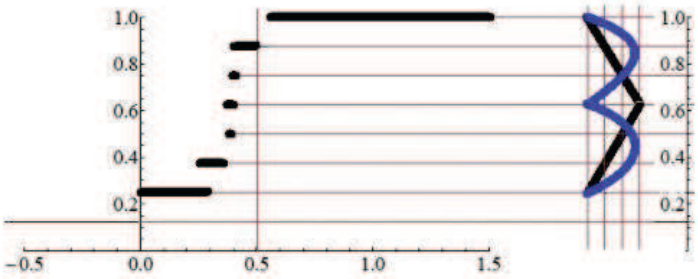


Fig. 4 b. [12]

Fig. 4. The cross sections of the three-dimensional representation of a reformulation [12] Riemann hypothesis.

Riemann zeta function has three areas corresponding values $v \to 0$, $v \to \infty$, $v \to c = 1$ and estimating the distribution of prime numbers on the real axis, it allows the model to describe random events [6].

[4] is considering random developments like the Brownian motion with a set length of Brownian steps or as a set of harmonic oscillators with varying wavelength or Kolmogorov complexity of a set of different characters in the line.

[4] splices solutions to Kolmogorov complexity when $v \to 0$ and $v \to \infty$ in area $v \to c$ and gets a single view of phenomena combining physics and the amount of information describing this phenomenon.

And just as the splicing two asymptotic formula for the Planck allowed to interpolate limits expressions on the whole area of the variables [5], the view the spectrum of the oscillator in the language of Kolmogorov complexity shows the deep inner connection between

quantum mechanics and the theory of information, enabling to conclude that the genuine law of physics is characterized by optimally low Kolmogorov complexity [4].

Economical values of Kolmogorov complexity suggest a rational way to save for "ordinary" representations of physical reality.

"An Exceptionally Simple Theory of Everything" has been proposed [13] based on the most singular simple Lie group E8.

E8 provides us with 248 fermions and 248 bosons.

And although the diagonal Cartan matrix for E8 gives gravitons of spin 2 (Cooper pairs of quantum with antiparallel spins or duality of the spin / torsion), that is, formally gravity, but the dynamics in the theory does not arise, as well as in the equations Wheeler - De Wit due to $v \rightarrow \infty$ and T = 0.

Apart from redundant for the Standard Model of quantum theory [13], in the E8 is still present and the number of scalar thousandth - really save them.

Let E8 as a limiting case for $v \rightarrow \infty$, and take from it only 496 anyons.

Spliced solution for $v \rightarrow c$ must include the Standard Model, which describes the particle 61, namely:

6 leptons e, μ, τ, νe, νμ, ντ

6 quarks u, d, c, s, t, b

12 bosons γ, W+, W-, Z0, 8 g

18 baryons n, p, Σ-, Σ0, Λ0, Σ+, Ξ-, Ξ0, Δ-, Δ0, Δ+, Δ++, Σ*-, Σ*0, Σ*++, Ξ*-, Ξ*0, Ω-

18 mesons K0, K+, π-, π0, π+, η`0, η0, K-, K0=, K*0, K*+, ρ-, ρ0, ρ+, φ, ω0, K*-, K*0=

1 boson H;

in total = 6 + 6 + 12 + 18 + 18 + 1 = 60 + 1

The second limiting case for $v \rightarrow 0$ corresponds to the group SU (3) describing 8 bosons.

So spliced solution must include 61 x 8 = 488 + 8 bosons (8 wave fronts performing superlight entanglement 8 Higgs and fixed at this point) = 496.

That is the SU (3) x 8 [U (1) x SU (2) x SU (3)] as the count 8 sets of particles of the Standard Model relying on each vertex of the physical vacuum grain (Fig. 5) or each grain of the physical vacuum is affected of all the particles of the Standard Model at each vertex.

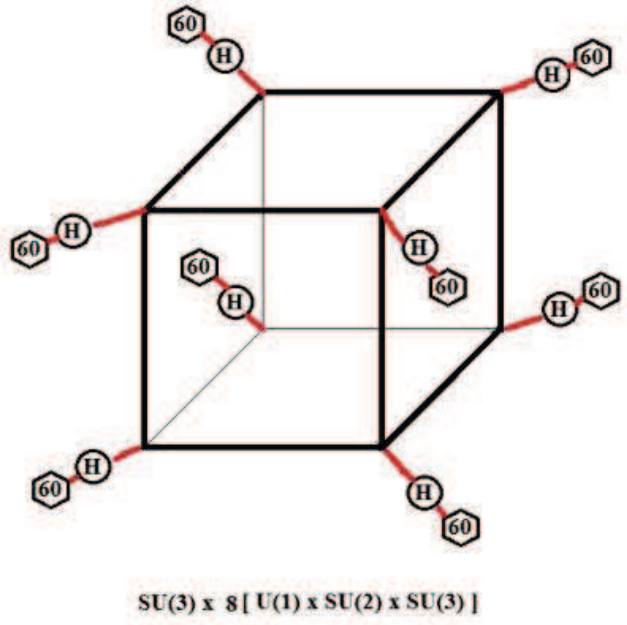


Fig. 5. Spliced solution Lisi-Pade theory.

We performed a splicings solutions:

E8 with gravity, but without moving, as v → ∞, and T = 0;

SU (3) without mass, but the time is, although in each moment of time entanglement act regarded as immobile v → 0;

And got:

«What could be more an Exceptionally Simple Theory of all Everything Lisi-Padé»: SU (3) x 8 [U (1) x SU (2) x SU (3)], is the mass and is the time, v → c.

Compression 3-dimensional cube on the plane (Fig. 6) representation 248 boson / 248 fermion naturally transformed into 496 anyons for which fractional charges [14] Majorana 1/5, 2/5, 1/3, this "birth injury" from the matriarchs E8 (Dynkin diagram).

Counter-rotation of a triangle and a pentagon is organizing charge alternation in the group SU (3) x {3 + 5} [U (1) x SU (2) x SU (3)] and generates nodal solitons waves in a quantum field of the superfluid gas - condensate Bose Einstein [15].

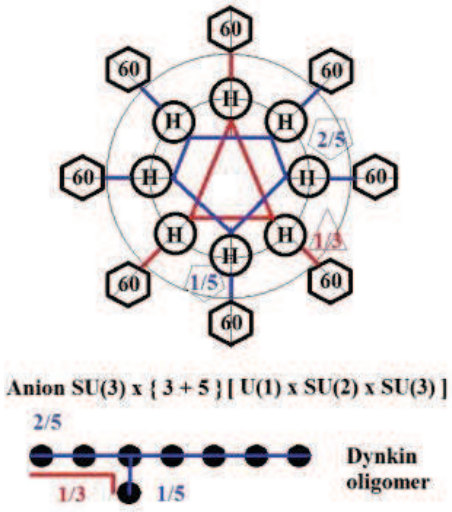
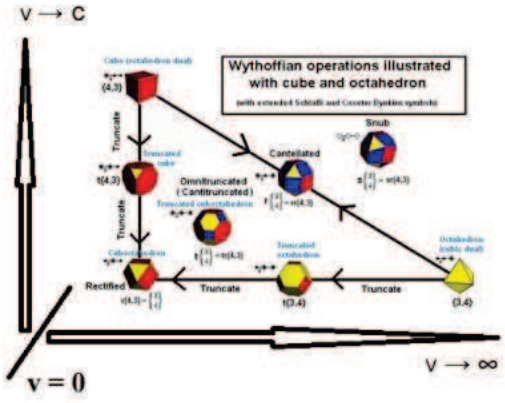


Fig. 6. Anyons in Lisi-Pade theory.

The Dynkins diagram describes the structure of E8 root system in the form of oligomer "1235" when entanglement produces polymeric physical vacuum Dynkins[*3].

There is no surprise in the fact that the structure of the physical vacuum gives us perceptions matter as long chains, as we can see the physical vacuum in the form of an ideal gas, superfluid or superconducting crystal (Fig. 7).



https://ru.wikipedia.org/ Диаграммы Дынкина

Fig. 7. The physical vacuum in the form of transitions between the forms of an ideal gas, superfluid, superconducting crystal and polymer.

Presented in Fig. 7 Rhombicuboctahedron rr {4,3} has the symmetry group of the order of 48 and can be represented as a transformation object between two extreme marginal figures with a "dynamic" group simmmetry the order also 48 [16].

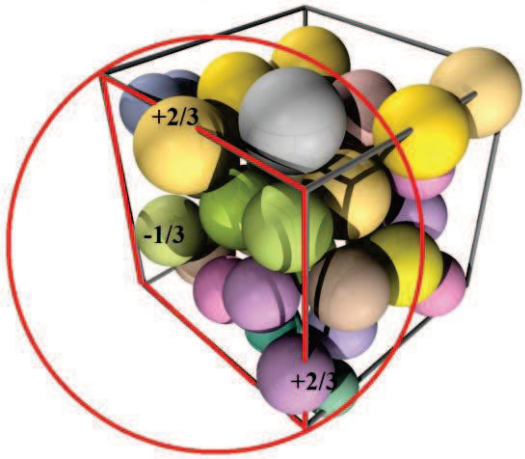
And in the general case you can obtain the most symmetrical system for N moving points.

For octaedron rr {4,3} criterion of "choreography" is equal to the total number of symmetries, divided by N, then there are 48/4 = 12, explains the existence of 12 bosons in the Standard Model without Higgs. In other words, for the dynamic matching asymptotic solutions for $v \rightarrow \infty$ and $v \rightarrow c$ Pade conversion should be carried out by 12 points.

Given the "choreography", assumptions about the dodecahedron topology of the universe [17] can never accept demonstrative character, assuming that the "choreography" the SU (3) x 8 [U (1) x SU (2) x SU (3)] it can not create a 4 or 8 areas on the map anisotropy of CMB and 496/4 satellite = 124 zebra stripes. That is, for reliable monitoring is not a zebra and dynamic octupole map anisotropy must be 496/8 = 62 satellite.

[18] showed that 128 particle, two Standard Models at two vacuum cube vertices, capable of organizing exp^250 ... exp^325 = 10^108 ... 10^141 of various configurations for 1 proton.

Quantum fluctuations of physical vacuum is occupied separate points in the space of only a entanglement planes (Fig. 8, Shown in reds lines), which unite not the entire particle and not arbitrarily, but only fragments thereof, in accordance with the symmetry of accessible quarks +2/3, -1/3 + 2/3. That is, the proton is a dynamic ensemble entangled " alien" quark, quarks belonging to different grains of the physical vacuum.



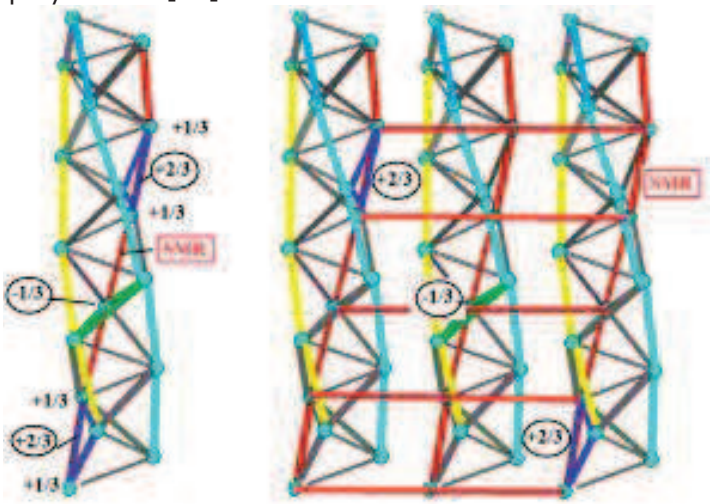
[18]

Fig. 8. Formation of a proton from the " alien" quarks.

Proton (Fig. 8, a red sphere) is filled with a large number of vacuum fluctuations, but only three of them are entangled every moment and giving the proton nature of individual particles observed. It is possible that in fact is a proton quasiparticle-like in their properties or soliton, or more private, skyrmion.

The simplest estimate of the proton lifetime configuration process takes time Plancks 10^-44 seconds is (10^108 ... 10^141) * 10^-44 = (10^64 ... 10^ 7) seconds, or /10^7 seconds/year = (10^57 ... 10^90). For the time chronon [19] is 10^-24 second proton is released life by 20 orders of magnitude greater. All of these values for the proton decay does not require significant reformatting of the Standard Model, but some cross-linking of several SM to the SU (3) x 8 [U (1) x SU (2) x SU (3)] with superluminal SMR.

Triangles of oktaedron {3,4}, the marginal figure on the axis v → ∞ via the superluminal entanglement (Fig. 9) on the line, on the plane, on the Hopf fibration able to join in helical stems lattice from the polyhedron [20].



[20]

Fig. 9. Entanglement combines dynamic symmetry quark into protons within a single rod, or multiple separate helicoids.

Entanglement combines dynamic symmetry quark into protons within the limits a single rod, or multiple separate helicoids.

Dynamic bundle of helicoids [21] using SMR generates fractional charges of quarks (Fig. 10.a), allows the protons having antiparallels spins to freely pass through each other [22] (Fig. 10.b) and the exchange of information on the charge balance with superluminal velocity creates a zero electric dipole moment of the neutron [23], [24].

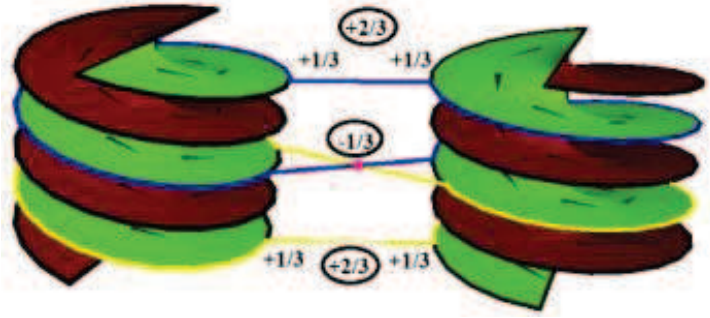


Fig. 10.a. [21]

Fig. 10.b. [21]

Fig. 10. Helical symmetry of protons and neutrons.

Geometric objects such limit forms to Fig. 7 can be transformed within an even-dimensional symplectic and odd-contact topology, creating rigidity / flexibility or hard / soft phenomena relevant tasks.

For each extreme case $v \longrightarrow \infty$ and $v \longrightarrow 0$ can be their "formal" solution to the problem, but if there are "real" solutions at the edges, or "real" solution is spliced to $v \longrightarrow c$?

I can particle regarded as a "solution", ie a proton regarded as "formal" solution, and the soliton as a "real" solution?

The answer on the nature of the cobordism [25] physical objects, which manifest themselves differently than they like geometric objects may lie in the mechanism of the process in the time dynamics of iterations leading to the spliced "real" solution.

Proton-soliton uniting "strangers" fragments oktaedrons, gets a mass as the energy soliton motion in a viscous medium, when the involve other vacuum grains in motion - non-Markovian Brownian motion in a viscous medium with memory. For non-Markov process The Future depends on the Past; Markov process for the Future depends on the Past through the Present.

In this connection, the Time Machine can be designed based on the fusion of the solutions for the two extreme ideas about Time, Time as a form of absolute stillness and infinite duration of sorting all configurations [18] and Time as a form of instantaneity during freezing sorting at the wave front surface exercising entanglement / connectivity.

$v \longrightarrow 0$ & $T = \infty$
$v \longrightarrow c$ & T
$v \longrightarrow \infty$ & $T = 0$

Spliced Time Machine will be non-Markov processes, and there is no place for the Present. Our Past defines our Future, but we do not have on the Arrow Times.

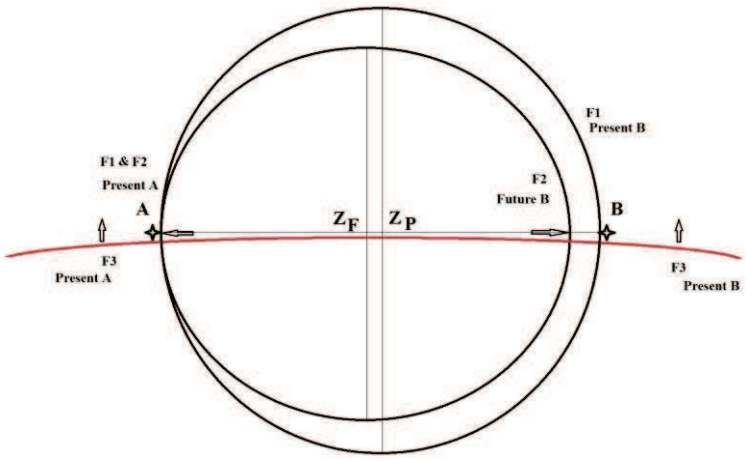


Fig. 11. The Light of Other Days communicates with the Future.

The prediction of our Future, the Future of Bob at the point "B" (Fig. 11.) possibly with the assistance of Alice in the "A" point.

Alice in the Present registers F2 front.

In Present Bob does not observe the front F2.

Front F2 will be part of Bob's status in the Future.

Alice using fronts F1 or the F3, which both have reached point "A" and "B" in the present, enters into superluminal communication with Bob.

Alice from point "A" tells Bob to point "B", at Present, that in the Future at the point "B" will take place events, information on who informed of Alice front F2.

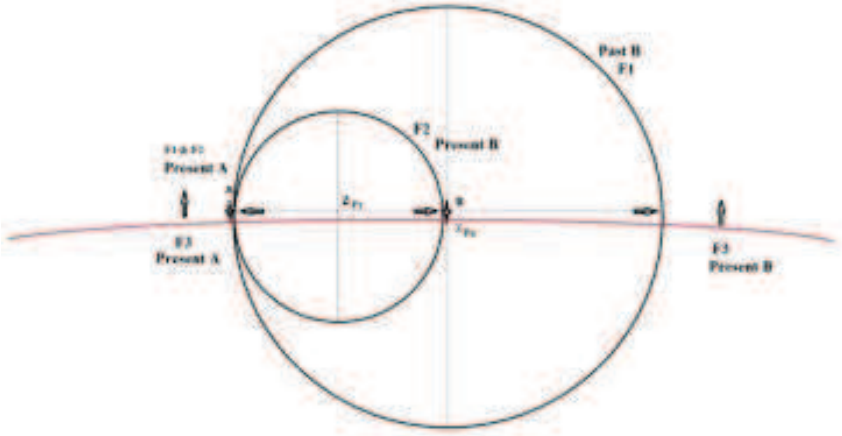


Fig. 12. The Light of Other Days communicates with the Past.

Communication with our Past, with Bobs Past, illustrates Fig. 12.

Alice in point "A" in her and Bob Present, registered Front F1.

Front F1 was emitted from point "B" in the Past. Maybe it was long before the existence and Alice and Bob in the Present.

Alice with the F2 or F3 fronts are simultaneously have reached the points "A" and "B" in the present, enters into superluminal communication with Bob.

Alice from point "A" tells Bob to point "B", at Present, that in the Past at the point "B" events exist, information on who informed until of Alice the front F1.

To know our Future and remember our Past, we need a interlocutors and a cobordism with the interlocutor[*4] creates the first part of the Time Machine - Oracle Machine.

The course of events in Time for T = 0 and T = ∞ can be represented in a more familiar form as a description of the electromagnetic field tensor with superlight components including $v \rightarrow \infty$ (in all forms of presentation can be entered and components $v \rightarrow 0$), for example:

$i^n c^n/\infty$	iEx/c	iEy/c	iEz/c
-iEx/c	Bx/∞	-Bz	By
-iEy/c	Bz	By/∞	-Bx
-iEz/c	-By	Bx	Bz/∞

Trace includes the sum of elements (Bx + By + Bz) / ∞ or (Bx + By + Bz) * 0, which can be easily identified as monopolies and as the cause of his absence in the observations.

The metric tensor with the superluminal components can be written similarly:

c/c	c/∞	c/∞
c/∞	c/c	c/∞
c/∞	c/∞	c/c

A familiar will spliced from two asymptotic forms of duality is very large and very small-scale R and 1/R for $v \rightarrow \infty$ and $v \rightarrow 0$, using the Pades approximation, the solution of SU (3) x 8 [U (1) x SU (2) x SU (3)] represents a certain form of renormalization.

However, the classical renormalization eliminates infrared and ultraviolet divergences, despite the fact that regularization procedure violates either supersymmetry or Lorentz invariance.

Renormalize of theory a classically, ie refusing to axes v → ∞, v → 0 and translating the action into a holographic projection on the axis v → c we thereby reject the observation of physical phenomena on a very large scale.

Leaving a the physical vacuum only microscopic manifestations, we do not use productive opportunities offered by the philosophy of physics - the axiom V. Samchenko (AS) on megascopic active medium. «The length of the superluminal path is determined by ... the length and properties of the superluminal active transmission medium. And this medium can be megascopic» [26].

Why not be the physical vacuum is the megascopic active transmission medium. The physical vacuum continuous combing of vectors field strength of self-organizing medium. And the collapse of the wave function is irreversible and non-equilibrium process, and, in spite of the superluminal speed of information transmission, there is no not single quantum, which would have moved the speed of light faster, ie causality violations do not occurs.

The structure of the physical vacuum for one spatial dimension on the scale R we can imagine as a set counterclaims positive and negative electromagnetic fronts within a single quantum fluctuations compensating each other and give a zero fluctuation in the average (Fig.13.1).

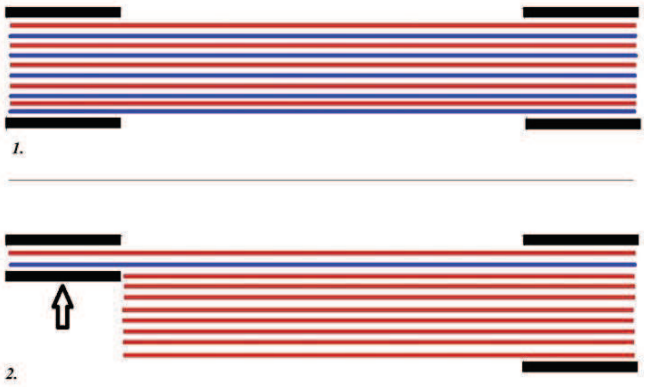


Fig.13. The dynamic Casimir effect changes the state of a quantum fluctuation.

To manipulate the quantum fluctuations of the state use the dynamic Casimirs effect [27] and using the movable mirror in the form of virtual SQUID initiate transition of the wave fronts of the physical vacuum in the real space observation.

Loaded with a SQUID high Q coplanar waveguide (Fig.13.2 & Fig.14) (size 100 microns) is able to create 10^5 photons per second, which is less than the possibility of CMD (10^6), but the telegraph had enough.

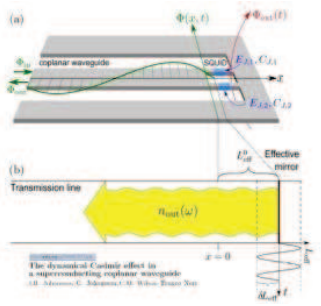


Fig.14. "Transmitter" [27].

The receiving device for detecting the state of the quantum fluctuations (Fig.15) also recently proposed [28].

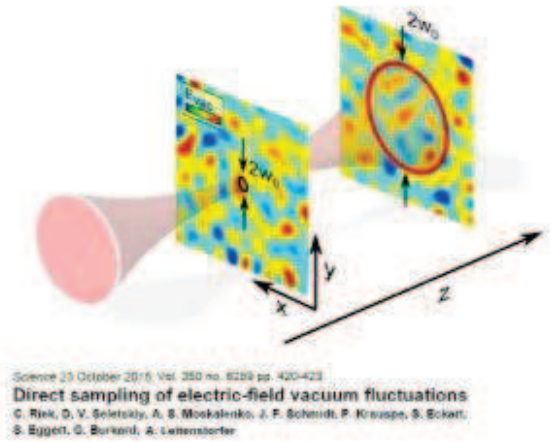


Fig.15. "Radioreceiver" [28].

A fundamentally great opportunities may implemented when forming devices [27, 28] in the form of matrices, for example, 10^5 x 10^5 with the size 10 x 10 m, which is quite achievable for satellite technology. At the slightest success does not come as a surprise and the project of the fleet of 62 satellites with a receiver-transmitters 100 x 100 km.

For a scale of 1 / R can be replaced by a coplanar waveguide resonator in the form crystal or of single molecules of different phosphates [29], particularly studied in detail in terms of coherency, compound $Ca_9(PO_4)_6$ [30]. The same molecule is convenient for observing the quantum fluctuations of changing its state. The excitation molecular vibrations in the composition of nerve qubits and registration of the influence of the physical vacuum in the molecule allows to realize both the transmitter and receiver in a single neuron of a single brain. And for Alice and Bob to quantum memory and quantum processor implemented in one, and in various the consciousnesses setting superluminal communication with each other.

Do enough power, sensitivity and selectivity of the transmitters and receivers of the Interlocutor? It is not a question to the physical principle, it is a question to the technical device. For the physical vacuum of these parameters enough to not remain in perpetual solitude.

Well, something like this, Your Ph.Va.

*1 *The one whose, name you can not pronounce, while Cat lays on the keyboard.*

2 «I - a Poet, I am called – Color-Flower, from me to all of you - greeting!», that is, all the poets - the colorful plants, Pasternak one more, one less, what's the difference.

3 Moreover, the vacuum creates a polymer, and biopolymers thereby formulating the anthropic principle. This principle is absolute, rejection of it resulting to the fact that Man, King of Beasts, his rejection of birthright, rejection of Leo, and entrusted the whole of Metaphysics to Cat. A Cat only "listens & eat" and die in an experimental box is not going to.

4 It is possible that Interlocutor is already present in our reality, at least a special state definition of "quantum crystal" on the Internet, marked Player [http://kniganews.org/2013/10/08/tachyonic-crystal/], there is a correct explanation of this phenomenon is not proposed. Or is it

simply the fruits of activities lunar physicists - Kantico and Quantico or professor Zvëzdochkin (prof. Mr. StarGazer) and professor Mordochkina (prof. Mrs. MuzzleDonna; an eye on the activities of these Carminative we opened professor Kozyavkin (prof. Mr. PetiteHexapod-DenseSnot) [Nosov N.N. "Dunno & Co"].

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